REMARKS

This amendment is responsive to the Office Action of October 8, 2003. Reconsideration and allowance of claims 1-19, 21-22 and 24-29 are requested.

The Office Action

Claims 1-5, 7 and 9 stand rejected under 35 U.S.C. §102(e) as being anticipated by McKinnon (US 6,591,127).

Claims 3, 7-9, and 11-21 stand rejected under 35 U.S.C. §102(e) as being anticipated by Townsend (US 6,490,476).

Claim 6 stands rejected under 35 U.S.C. §103(a) as being unpatentable over McKinnon (US 6,591,127).

Claims 4-6 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Townsend (US 6,490,476).

Claims 10 and 22-29 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Townsend (US 6,490,476) in view of Dinkler (US 2002/0032927).

The Present Application

The present application is directed to a multimodality imaging system. Two scanners take images of a patient supported by a couch. The couch is moved longitudinally through a first bore of a first scanner and a second bore of a second scanner. Axes of the two scanners are aligned with each other and with a central axis of the patient. A sufficient opening is formed between the bores of the scanners for a caretaker to perform operations on the patient. A substantially continuous fluid control surface extends longitudinally between the bores of the scanners from their housings when the scanners are secured together. In a direction parallel to the short axis of the scanners, the fluid control surface is an arcuate surface extending outwardly and downwardly toward lateral sides of the scanners.

The housings of the two scanners are secured together by bolts which extend between their opposing faces and which are loosened to separate the scanners for transport. Alternatively, other securing means such as fasteners, glues, or thermal welding is used. In one embodiment, the housing is constructed as an integral unit.

The References of Record

McKinnon discloses a multi-modality imaging system which includes an MRI and x-ray system. An integral MRI housing is divided into two sections positioned on opposite ends forming an intermediate patient access area at its imaging region. The MRI system is positioned in the end sections, while the x-ray system is positioned in the patient access area/common, open imaging region.

Townsend discloses a PET scanner and a CT scanner which can be positioned adjacent but spaced from each other (FIG. 2b) or remote (FIG. 2c).

Dinkler discloses a surgical table extension and radiolucent adaptor assembly. A table has a headrest which surrounds an area 34 which can have a plurality of holes for purposes such as ventilating the patient, access for tubes and other equipment, drainage, or openings through which the patient can see and be seen. There is no drainage surface extending from the housing.

The Claims Distinguish Patentably Over the References of Record

Claim 1 calls for among other limitations: the spacing between the bores which is free of obstructions in a region above the patient. Initially, Applicants respectfully traverse Examiner's interpretation of McKinnon. McKinnon discloses a multi-modality system which employs an MRI scanner and an x-ray system. Applicants respectfully submit that the x-ray system of McKinnon, e.g. second imaging system, is lacking a defined bore. Applicants direct Examiner's attention to the American Heritage College Dictionary, 3rd ed., p. 161 which includes a definition of a bore as "a hollow, usually cylindrical, chamber." The bore of the x-ray system of McKinnon is not a hollow chamber as disclosed in the present application. Next, Applicants submit that the patient access area of McKinnon is not free of obstructions in a region above the patient. Fig. 1 clearly shows the x-ray system positioned in the patient access area. The patient access area of the present application is formed such that it is free of any obstacles approximately over the span of 180 degrees above the patient couch. It is therefore respectfully submitted that **claim 1** distinguishes patentably and unobviously over McKinnon.

Claim 2 calls for among other limitations: engageable securement structures which extend from at least one of the first housing and the second housing to fixedly attach the first and second imaging devices in positions fixed relative to each other and relative to the imaging axis. McKinnon discloses an integral housing which is divided into two stationery, permanently fixed sections which are positioned on opposite ends of the multi-modality system allowing for an open area in between. An MRI system is positioned in the end sections while an x-ray system is positioned in the central open area. McKinnon does not disclose or suggest a multimodality system in which the modalities are held in a fixed abutting relationship of the securement structures. Rather, McKinnon's x-ray device appears to be freely moveable and is not shown to abut the MRI end structures. It is therefore respectfully submitted that **claim 2** distinguishes patentably and unobviously over McKinnon.

Claim 3 calls for among other limitations: an arcuate surface formed between at least the first and second imaging devices underneath the patient support structure when the openings are secured together. McKinnon as well as Townsend does not disclose a surface formed when the devices are secured together. Dinkler discloses a surgical table with a headrest which surrounds an area 34 which can be a plurality of holes for purposes such as ventilating the patient, access for tubes and other equipment, drainage, or openings through which the patient can see and be seen. Neither of the references discloses or suggests an arcuate drainage surface which is formed under the patient couch when the bores of the scanners are secured together. It is therefore respectfully submitted that **claim 3 and claims 4-9** dependent on claim 3 distinguish patentably and unobviously over McKinnon, Townsend and Dinkler, taken singularly or in combination.

Claim 10 was written in an independent form and calls for among other limitations: a fluid control surface positioned beneath the patient support structure and between the first and second imaging devices for directing liquids falling onto the surface from the vicinity of the patient support structure away from the subject patient. Townsend discloses a combined PET and CT scanning system for acquiring images sequentially in a single device. Townsend is not concerned with the fluid control surface. Dinkler discloses a surgical table with a headrest which surrounds an area 34 which can be a plurality of holes for purposes such as ventilating the patient,

access for tubes and other equipment, drainage, or openings through which the patient can see and be seen. In contrast, claim 10 calls for a surface which is formed underneath the patient couch when the housings of the scanner are brought into the closed position and secured together. Neither Townsend, nor Dinkler, taken singularly or in combination, discloses or suggests a fluid control surface which is formed underneath the patient couch by securing together the housings of the scanners. It is therefore respectfully submitted that **claim 10** distinguishes patentably and unobviously over Townsend and Dinkler.

Claim 11 calls for among other limitations: a substantially continuous arcuate surface which is formed in an axial direction. The arcuate surface has a peak located underneath the patient and extends outwardly and downwardly from the peak and toward lateral sides of the housing. In Townsend, no surface is defined between the scanners. Dinkler discloses a surgical table with a headrest which surrounds an area 34 which can be a plurality of holes for purposes such as ventilating the patient, access for tubes and other equipment, drainage, or openings through which the patient can see and be seen. Neither of the references discloses or suggests a continuous drainage arcuate surface having a peak underneath the patient table and extending outwardly and downwardly underneath the patient. It is therefore respectfully submitted that **claim 11 and claims 12-16** dependent on claim 11 distinguish patentably and unobviously over Townsend.

Claim 17 calls for among other limitations: defining a lower end of an access area with an arced surface. In Townsend, the scanners are spaced with no interconnecting surfaces. Dinkler discloses a surgical table with a headrest which surrounds an area 34 which can be a plurality of holes for purposes such as ventilating the patient, access for tubes and other equipment, drainage, or openings through which the patient can see and be seen. Neither of the references discloses or suggests forming an arced surface at a lower end of a patient access area. It is therefore respectfully submitted that **claim 17 and claims 18-19 and 21** dependent on claim 17 distinguish patentably and unobviously over Townsend.

Claim 22 calls for among other limitations: a drainage surface which slopes downwardly and away from the patient to drain fluids away from the patient. Townsend discloses a combined PET and CT scanning system for acquiring images

sequentially. Townsend is not concerned with the drainage surface. Dinkler discloses a surgical table with a headrest which surrounds an area 34 which can be a plurality of holes for purposes such as ventilating the patient, access for tubes and other equipment, drainage, or openings through which the patient can see and be seen. Dinkler does not disclose or suggest a drainage surface disposed below the patient to drain fluids away from the patient. Neither Townsend, nor Dinkler, taken singularly or in combination, discloses or suggests a drainage surface which runs underneath the patient couch and slopes downwardly and away from the patient. Because **claim 22** distinguishes patentably and unobviously over Townsend and Dinkler, Applicants respectfully request this ground for rejection of claim 22 be withdrawn. It is therefore respectfully submitted that **claim 22 and claims 23-29** dependent on claim 22 are allowable.

CONCLUSION

For the reasons set forth above, it is submitted that claims **1-19, 21-22 and 24-29** (all claims) distinguish patentably over the references of record and meet all statutory requirements. An early allowance of all claims is requested.

In the event the Examiner considers personal contact advantageous to the disposition of this case(s), he is requested to telephone Tom Kocovsky at (216) 861-5582.

Respectfully submitted,

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